other affections of the rectum; after surgical operations about the pelvis or abdomen; in inflammatory or spasmodic diseases of the genito-urinary organs; in pregnant and puerperal females; or, to quote the words of Christison when speaking of oleum ricini, 'in all circumstances where it is desirable to move the bowels gently without occasioning local irritation or general disturbance.'"

18. *Antagonism of Medicines.*—In our preceding number we gave the results of the experiments made by a committee of the British Medical Association, on the antagonism of certain medicines, and the following are the results of these investigations in regard to the other articles experimented with:—

VI. *As to the Antagonism between Tea, Coffee, Theine, Caffeine, Guaranine, on the one hand, and Meconate of Morphia on the other.*

In this investigation, one hundred and seventeen experiments were performed.

1. Theine is antagonistic to meconate of morphia, inasmuch as the action of the one substance modifies that of the other, and may even save life from a fatal dose of either substance.

2. Meconate of morphia delayed the appearance of the convulsions characteristic of the action of theine; but, on the other hand, theine, if given in large doses, did not affect in a marked degree the action of meconate of morphia, because symptoms of poisoning by theine were soon manifested.

3. Further experiments on cats showed that, (*a*) while a cat may recover from the effects of a dose of 1¾ grains of meconate of morphia given alone, it will not recover from the effects of a dose of 2 grains, even although the effects of the latter dose are modified by those following the introduction of 4 or 5 grains of theine; (*b*) that in three cases the animals recovered from the effects of 1⅞ grains of meconate of morphia and 4 to 5 grains of theine, while they died when the same dose of meconate of morphia was administered eight days afterwards; (*c*) that, when the dose of theine was increased beyond five grains, the animals invariably died, apparently from the effects of theine.

4. Experiments on rabbits, as to the antagonism between meconate of morphia and theine, were found to be unsatisfactory as regards the purposes of this inquiry, because both drugs produce epileptiform convulsions in these animals.

5. The results obtained in investigating the action of caffeine and guaranine as antagonists to meconate of morphia were similar to those observed with reference to theine.

6. Experiments were made on dogs to ascertain the effects of strong infusions of tea and decoctions of coffee as antagonists to meconate of morphia. These were unsatisfactory, chiefly because the tea or coffee was usually vomited so soon as to prevent the possibility of the exercise of any physiological antagonism. At the same time, it was observed in several instances that the administration of tea or coffee so excited the animals as to prevent them from falling into stupor or coma after a dose of meconate of morphia, which would have produced this effect had the tea or coffee not been given.

VII. *Antagonism between Extract of Calabar Bean and Strychnia.*

In this investigation, thirty experiments were performed.

Although the symptoms produced by either substance were modified considerably by the action of the other, there was no instance of recovery from a fatal dose.

VIII. *As to the Antagonism between Bromal Hydrate and Atropia.*

In this investigation, thirty-six experiments were performed.

1. There is a distinct physiological antagonism between bromal hydrate and atropia.

2. After a fatal dose of bromal hydrate, the introduction of atropia arrests excessive secretion from the salivary glands and mucous surfaces of the lungs, and thus obviates the tendency to death from asphyxia caused by the accumulation of fluids in the air-passages. Atropia also causes contraction of the

bloodvessels, and thus antagonizes the action of bromal hydrate, which causes dilatation of these vessels by paralysis of the sympathetic nerve.

3. While atropia may save life after a fatal dose of bromal hydrate, the converse apparently does not hold good, as we have never succeeded in saving life after a fatal dose of atropia by the subsequent injection of bromal hydrate.—*British Med. Journ.*, Jan. 23, 1875.

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19. *Chemistry of Therapeutics.*—The number of the *British Med. Journal*, for Jan. 30th, contains an interesting article by Dr. JOHN MCKENDRICK, "on the influences which a knowledge of the facts and laws of chemical science have, or ought to have, upon the practice of therapeutics." The conclusion at which he arrives is "that we know little regarding the chemical processes occurring in the living body, either in health or in disease, which can be of much service in the practice of therapeutics. But we know that chemical processes do occur which are closely connected with the manifestation of vital phenomena. If such chemical changes do occur, we may reasonably expect to be able to influence them by the introduction of chemically active substances. This opens up another line of inquiry; namely, how far can we produce changes in physiological action by changing the chemical composition of the substance introduced into the body? The answer to this question is not only likely to be of practical service to therapeutics, but it may reflect light on the true character of those chemical changes occurring in the living tissues, the investigation of which is so difficult."

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

20. *Treatment of Typhoid Fever by Cold.*—Dr. F. T. ROBERTS, Assistant Physician and Teacher of Clinical Medicine in University College Hospital, gives (*Practitioner*, January, 1875) the following as the conclusions which he has arrived at with respect to the treatment of typhoid fever by cold.

"1. It is highly desirable that the members of our profession should be more generally impressed than they are at present with the usefulness of the various modes of applying cold to the surface of the body in febrile cases, under certain circumstances; and that they should be prepared without hesitation to carry one or other of them out efficiently whenever this plan of treatment is indicated. This applies to typhoid in common with other fevers.

"2. On the other hand, to adopt a routine hydropathic treatment of any fever seems to me most objectionable, and this applies especially to the more severe methods which are advocated. As already remarked, they are not easily carried out in general practice; they are certainly not required in a large proportion of cases; most of them are anything but pleasant to the patients, and they may prove very trying and exhausting, especially if frequently repeated, as they usually need to be if the treatment is efficiently fulfilled; while it must be remembered that they are not harmless measures, but may have a powerful influence for evil as well as for good. With regard to typhoid, many cases do not come under observation until it is too late to attempt to check the primary fever, even supposing that the intestinal lesion could be thus limited. For these and other reasons I do not see that, at present at least, a hydropathic treatment of typhoid fever in general practice has any claim to our support. If it is thought worthy of trial it ought first to be fairly tested in *bonâ fide* cases of this disease, and under the strictest and most competent supervision. With regard to sponging of the skin, I believe that this is often very useful, and ought to be employed far more frequently than it is at present, in typhoid as well as in other fevers. With proper care it does no harm, while it often gives much relief, and is beneficial in other respects.

"3. The cases in which the more severe methods of applying cold are indi-